

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
27 January 2005 (27.01.2005)

PCT

(10) International Publication Number
WO 2005/007802 A2

(51) International Patent Classification⁷: C12N

(21) International Application Number:
PCT/US2003/008128

(22) International Filing Date: 14 March 2003 (14.03.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/364,876 15 March 2002 (15.03.2002) US

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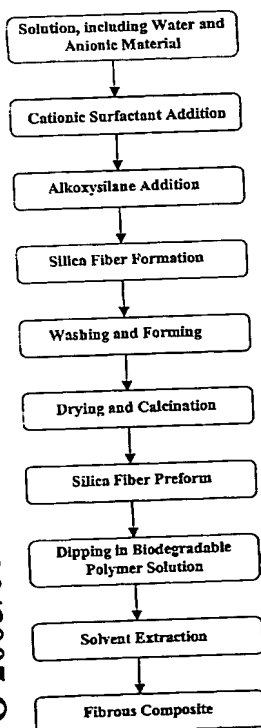
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(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,

[Continued on next page]

(54) Title: FIBROUS COMPOSITE FOR TISSUE ENGINEERING



(57) Abstract: Provided are fibrous composites prepared by methods of the present invention, comprising oxides and biodegradable polymers, in which the fibers are made of aerogel-like oxide materials having nanometer-sized pores. The fibrous composition advantageously has, at least, the following characteristics: (i) a very high nanoporous surface area, which also permits nucleation of crystallites; (ii) mesoporous / macroporous interspatial networks between the fibers, providing high bioactivity and a high transport rate; (iii) macropores for natural bone-like tissue growth; (iv) good mechanical properties for handling and for implant support; and (v) biodegradability for implant dissolution and time-variable mechanical properties. Further provided are methods for using the bioactive biodegradable fibrous composites as osteogenic composite materials for tissue engineering, tissue re-growth, bone implants, and bone repair, and/or for the delivery of drugs or therapeutic compounds.

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ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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Published:

— *without international search report and to be republished upon receipt of that report*

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/08128

A. CLASSIFICATION OF SUBJECT MATTERIPC(7) : A61F 2/02
US CL : 424/423, 426

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHEDMinimum documentation searched (classification system followed by classification symbols)
U.S. : 424/423, 426

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,261,679 A (CHEN et al) 17 July 2001 (17.07.2001), see entire document.	1-25

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

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Date of the actual completion of the international search

11 March 2005 (11.03.2005)

Date of mailing of the international search report

04 APR 2005

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